

1 Claims 1-45 are pending and are listed below:

2
3 1. (Original) A method of providing a user interface (UI) comprising:
4 rendering a DHTML document from an XML document using at least one
5 XSLT transformation (XSL-T); and
6 presenting a user interface based, at least in part, on the XSL-T that was
7 used to render the DHTML document.
8

9 2. (Original) The method of claim 1, wherein said presenting comprises
10 automatically presenting the user interface.
11

12 3. (Original) The method of claim 1, wherein the user interface
13 comprises a context block.
14

15 4. (Original) The method of claim 1, wherein the user interface
16 comprises an in-document user interface.
17

18 5. (Original) The method of claim 1, wherein the user interface
19 comprises an accelerator.
20

21 6. (Original) The method of claim 1, wherein the user interface
22 comprises one or more of the following: a context block, an in-document user
23 interface, and an accelerator.
24

25 7. (Original) The method of claim 1, wherein the presenting comprises
deciding which user interface to present from a number of user interfaces.

1
2 8. (Original) The method of claim 7, wherein deciding comprises:
3 ascertaining a user's actions within a document; and
4 presenting a user interface based on the ascertained user's actions.
5

6 9. (Original) One or more computer-readable media having computer-
7 readable instructions thereon which, when executed by a computer, implement the
8 method of claim 1.
9

10 10. (Original) A method of providing a user interface comprising:
11 considering multiple parameters one of which includes an XSL-T file; and
12 based upon the considered parameters, rendering a user interface sufficient
13 to enable a user to interact with a DHTML view that has been rendered by the
14 XSL-T file from an XML document.
15

16 11. (Original) The method of claim 10, wherein one parameter
17 comprises a user location within a particular document.
18

19 12. (Original) The method of claim 10, wherein one parameter
20 comprises a portion of an XML schema that corresponds to a user's selection.
21

22 13. (Original) The method of claim 10, wherein one parameter
23 comprises one or more UI types that would be desirable to generate.
24

25 14. (Original) The method of claim 10, wherein the parameters
comprise:

1 a user location within a particular document;
2 a portion of an XML schema that corresponds to a user's selection; and
3 one or more UI types that would be desirable to generate.
4

5 15. (Original) The method of claim 10, wherein the considering of the
6 multiple parameters comprises considering one or more constructs within an XSL-
7 T file.
8

9 16. (Original) The method of claim 10, wherein the considering of the
10 multiple parameters comprises identifying from multiple user interfaces which
11 user interfaces are more suited to have their functionalities provided by an in-
12 document user interface.
13

14 17. (Original) The method of claim 10 further comprising modifying
15 structure of the XML document based upon the user engaging the user interface.
16

17 18. (Original) The method of claim 10, wherein the user interface
18 comprises an in-document user interface.
19

20 19. (Original) One or more computer-readable media having computer-
21 readable instructions thereon which, when executed by a computer, implement the
22 method of claim 10.
23

24 20. (Original) A method of providing a user interface comprising:
25 making a selection in a DHTML view;

1 determining, based upon the selection, a corresponding selection in an
2 XML document;

3 determining, based upon the corresponding selection in the XML
4 document, a corresponding portion of an XML schema;

5 determining, based upon the XML schema portion, one or more types of
6 action that can be undertaken;

7 producing one or more operations that can be undertaken for various
8 determined action types; and

9 determining, from an XSL-T file that rendered the DHTML view, a user
10 interface type that can be displayed for a user and used to implement the one or
11 more operations.

12
13 21. (Original) The method of claim 20, wherein the making of the
14 selection comprises moving a cursor to a particular area within a document.

15
16 22. (Original) The method of claim 20, wherein the action types
17 correspond to ways in which a user might manipulate a portion of a document they
18 have selected.

19
20 23. (Original) The method of claim 20, wherein the user interfaces
21 comprise in document user interfaces.

22
23 24. (Original) The method of claim 20 further comprising displaying an
24 in-document user interface of a determined interface type for the user.

25

25. (Original) The method of claim 24 further comprising manipulating structure of the XML document based upon user input through the displayed user interface.

26. (Original) One or more computer-readable media having computer-readable instructions thereon which, when executed by a computer, implement the method of claim 20.

27. (Original) A method of manipulating an XML document comprising:

defining one or more crystals, each of which containing one or more behaviors and an XSLT transformation for transforming an XML document into a DHTML view;

using the one or more crystals to render a DHTML view from an XML document:

enabling user interaction with the DHTML view; and

mapping, via the one or more behaviors, user interactions in the DHTML view to the XML document.

28. (Original) The method of claim 27, wherein the one or more behaviors are data-shape dependent.

29. (Original) The method of claim 27, wherein the one or more behaviors are data-shape dependent on a data shape defined by the XML document.

1 **30.** (Original) The method of claim 27, wherein the one or more
2 behaviors are configured to function independently of an XML schema of which
3 the XML document is an instance.

4
5 **31.** (Original) The method of claim 27, wherein the one or more
6 behaviors are configured to function independently of XML tags that might be
7 used.

8
9 **32.** (Original) The method of claim 27, wherein the behaviors are
10 implemented as binary code.

11
12 **33.** (Original) The method of claim 27, wherein the crystals are reusable
13 across different XML documents.

14
15 **34.** (Original) One or more computer-readable media having computer-
16 readable instructions thereon which, when executed by a computer, implement the
17 method of claim 27.

18
19 **35.** (Original) One or more computer-readable media having computer-
20 readable instructions thereon which, when executed by a computer, cause the
21 computer to:

22 provide multiple crystals, each of which containing one or more behaviors
23 and an XSLT transformation for transforming an XML document into a DHTML
24 view;

25 use one or more of the crystals to render a DHTML view from an XML
document;

1 attach at least one behavior to at least one DHTML tag;
2 ascertain that a user has interacted with a DHTML view associated with the
3 at least one DHTML tag; and
4 use the behavior associated with the at least one DHTML tag to map a user
5 interaction back to the XML document and make associated structural changes in
6 the XML document.

7
8 36. (Original) The one or more computer-readable media of claim 35,
9 wherein the behaviors are implemented as binary code.

10
11 37. (Original) The one or more computer-readable media of claim 35,
12 wherein the behaviors are data shape dependent.

13
14 38. (Original) The one or more computer-readable media of claim 35,
15 wherein the behaviors are not dependent upon an XML schema.

16
17 39. (Original) A method of manipulating an XML document
18 comprising:

19 associating one or more behaviors with a DHTML tag in a DHTML view
20 that has been rendered from an XML document; and

21 responsive to a user interacting with a DHTML view associated with the
22 DHTML tag, using the one or more behaviors to map user interactions to the XML
23 document and effect structural changes on the XML document.

24
25 40. (Original) The method of claim 39, wherein the one or more
 behaviors are data shape-dependent.

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2 **41. (Original)** The method of claim 39, wherein the one or more
3 behaviors are data shape-dependent, the data shape being defined by the XML
4 document.

5
6 **42. (Original)** The method of claim 39, wherein the one or more
7 behaviors are independent of any XML schema.

8
9 **43. (Original)** The method of claim 39, wherein the one or more
10 behaviors are independent of data values.

11
12 **44. (Original)** The method of claim 39, wherein the one or more
13 behaviors are independent of one or more of: (a) any XML schema and (b) data
14 values.

15
16 **45. (Original)** A software structure embodied on a computer-readable
17 medium comprising one or more crystals, each of which containing at least one
18 behavior and XSL-T for rendering XML into DHTML, the behaviors being data
19 shape dependent and being configured for use with common data shapes
20 independent of any XML schema.